April 22, 2015

Randall A. Snyder
President, Wireless Research Services, LLC
8113 Bay Pines Avenue
Las Vegas, NV 89128

*Via ECFS*

Ms. Marlene H. Dortch, Secretary
Office of the Secretary
Federal Communications Commission
445 12th Street SW
Washington, D.C. 20554

Re: Comments on Petition for Expedited Declaratory Ruling Filed by Blackboard, Inc.
CG Docket No. 02-278, DA 15-364

Dear Ms. Dortch:

I am writing to the Commission to provide my comments regarding the Petition for Expedited Declaratory Ruling filed by Blackboard, Inc. I am a wireless technology engineer and consultant and have been retained as an expert witness in nearly 70 Telephone Consumer Protection Act (TCPA) lawsuits representing both plaintiffs and defendants regarding automatic voice-call and automatic text message technology. My expert opinions have even been cited by the United States Court of Appeals for the Ninth Circuit on the issue of what constitutes an automatic telephone dialing system (ATDS) under the TCPA. *See Satterfield v. Simon & Schuster, Inc.*, 569 F.3d 946, 951 (9th Cir. 2009). I have been involved in many areas of both landline and wireless telecommunications since 1987, and have enclosed a copy of my CV along with this letter. Please note that I am not being compensated for sending the Commission this letter.

In my professional capacity, I have become very familiar with the TCPA, associated FCC regulations and dozens of district court and appellate court opinions regarding the TCPA. In

many cases, the organization defending an alleged TCPA violation is a technology provider that places automatic text message calls and voice calls to cellular subscribers. Blackboard, Inc. is such a technology provider, selling mass communication services to the educational, business and government markets.

Blackboard, Inc. is asking the FCC to rule that, "all automated informational messages sent by an educational organization…are calls made for 'emergency purposes' and thus are outside the requirements of the Telephone Consumer Protection Act (TCPA)." (Blackboard Petition at 11-12.) Blackboard argues that "all school-initiated informational messages should be considered sent for 'emergency purposes.'" (Blackboard Petition at 8.)

I find this request to be entirely unnecessary and, if granted, fraught with so many problems that it will likely weaken substantially the TCPA's consumer protections and effectively nullify existing regulations requiring prior express consent to receive automatic calls and text messages.

The FCC has already issued clear and unambiguous regulations regarding automatic informational calls to cellular telephone subscribers and the need for prior express consent from individuals to receive such calls. *See In the Matter of Rules and Regulations Implementing the Telephone Consumer Protection Act of 1991, Report and Order*, ¶¶ 3, 28 (February 15, 2012). In fact, the FCC specifically uses the example of "school closings" as an informational message that requires prior express consent, separate and distinct from calls made for "emergency purposes" to which the TCPA restrictions do not apply." (¶ 3).

As a parent, I have personally received automatic calls from the Clark County School District regarding information about the school district itself and the middle school my child attends. I have provided my consent to receive these calls. They occur, on average, about once per week pertaining to school board meetings, school events (including student sports, concerts, science fairs and parent-teacher conferences) and information particular to my child, such as absence and tardy notifications. I am also provided the opportunity to opt-out of these calls, for example, in the event they become too bothersome or I am no longer interested in receiving them. However, I have no need or desire to ever opt-out of receiving automatic calls or messages that convey true and immediate emergency information about my child and his school, such as a campus lock-down, a school shooting or a fire. I imagine other parents would feel the same.

I also have no need to opt-out of other true and actual automatic emergency calls, such as the emergency call examples provided in the FCC's 2012 Report and Order—"emergency messages permitted by the WARN Act and/or the Commercial Mobile Alert System (CMAS)." (¶ 17.) As stated by the FCC, such emergency calls are placed via an automated alert system that provides them *free of charge* to the recipients and limits alerts to (1) alerts issued by the President, (2) alerts involving imminent threats to safety or life and (3) Amber Alerts. *See* http://www.fcc.gov/guides/wireless-emergency-alerts-wea.

I do not consider any of the purely informational calls I receive regarding my child's school—such as school events, school board meetings and the like—as emergency calls, nor should they be characterized as such. The automated calls that Blackboard is seeking to exempt would *not* be free of charge to recipients, would *not* enable individuals to opt-out of receiving

them and would communicate far less dire matters than those currently permitted under the WARN Act.

To be sure, there are circumstances that are true emergencies—such as school violence, fires and tornadoes—but calls and text messages in such situations would undoubtedly already be covered under the emergency exemption under the TCPA, and no additional action from the FCC would be required for such true emergencies. However, such true emergencies are just a small fraction of the total number of calls and text messages that are actually sent by Blackboard. In fact, according to Blackboard's own marketing material for their Blackboard Connect™ service, the Blackboard Connect™ service allows its educational customers to send automatic calls and text messages for a multitude of purposes, none of which at all qualify as emergencies. The examples Blackboard cites include automated calls and text messages reminding parents of outstanding library and cafeteria balances, daily attendance reminders, and grade reports. *See attached Blackboard Connect 5 marketing brochure*. Blackboard also advertises its Blackboard Connect™ service as a way for colleges to advertise themselves to prospective students using the same automated calls and text messages. *See attached Blackboard Connect Higher Education brochure*. Blackboard is now seeking to have *all* of these calls—including cafeteria balances and for-profit college advertising to prospective students—deemed "emergencies" and thus, effectively exempted from any TCPA oversight simply because they relate to an educational organization. Such an action from the FCC would be unwarranted and fraught with abuse.

Granting Blackboard's request to categorize informational calls as emergency calls simply because they are made on behalf of a customer in the education sector will render the

TCPA meaningless. Classifying automated informational calls as automated emergency calls made on behalf of any particular market or industry would simply allow automated calls to be made without any governmental or regulatory oversight. There is no exceptional nature to automated informational calls regarding everyday alerts and notices concerning an educational organization; they are the same as those from any other institution and should definitely remain within the current regulatory constraints of the TCPA. Otherwise, there is nothing to prevent another organization from claiming an emergency exemption for any number of automated informational calls made to any cellular number, and regulations requiring consent would effectively cease to apply.

Blackboard also argues that "[t]he automated messages distributed by Blackboard's educational customers are precisely the types of informational messages that consumers want to receive on their wireless devices, which is why most recipients provide a wireless telephone number as the primary method for a school to contact them." (Blackboard Petition at 6-7.) In addition, as cited by Blackboard, the FCC has ruled that, "persons who knowingly release their phone numbers have in effect given their invitation or permission to be called at the number which they have given, absent instructions to the contrary." (Blackboard Petition at 9-10, citing the original FCC's TCPA Report and Order of 1992, ¶ 31.) Furthermore, Blackboard states that "Blackboard's educational customers have received the necessary 'prior express consent' to place informational, non-telemarketing calls to wireless telephone numbers." (Blackboard Petition at 10.)

Notably, if Blackboard's educational customers receive prior express consent voluntarily from individuals to automatically call their cell phone numbers, then Blackboard needs no emergency exemption to place automated calls to such numbers. The TCPA clearly states that it is a violation to place calls "without prior express consent." If all of the calls made by Blackboard on behalf of its educational customers were made with prior express consent then there can be no violation of the TCPA, regardless of whether the calls were placed for emergency purposes or not.

Accordingly, Blackboard's actual motivation for seeking this emergency exemption appears to be rooted in shirking responsibility for making misdirected calls to individuals who did not provide prior express consent in violation of the TCPA. Indeed, after a review of the Federal Judiciary's public access service (PACER), it is rather clear that Blackboard seeks this added protection from the FCC to avoid liability in a recently-filed TCPA lawsuit.

In essence, the emergency exemption that Blackboard is seeking provides no value whatsoever, as the company claims to have already obtained prior express consent for automated calls and text messages and there is no need to obtain consent for legitimate automated emergency calls and text messages. Blackboard already has consent to make emergency *and* non-emergency phone calls to the individuals from whom it receives cellular telephone numbers; an emergency exemption would only add protection against making unauthorized *misdirected* calls. Since actual legitimate emergency calls are already exempt from liability regardless of the call recipient, Blackboard seems to seek a *carte blanche* regulatory exemption for all *misdirected*, *non-emergency* informational calls, which are related to its own line of business. The only

practical effect of granting Blackboard's emergency exemption would be to allow it to violate the TCPA's current restrictions and place automated calls to cellular telephone numbers of individuals who never provided prior express consent to be called.

Such unauthorized automatic calls are a significant nuisance and also have an economic cost. Cellular subscribers are either charged for these calls or they lose minutes or messages from their subscription plans. In fact, just a brief look at various online "complaint boards" shows that the Blackboard misdirected call problem is widespread and presently occurring. Many people have complained, not just of receiving unauthorized automatic calls or texts, but also not being able to get them to stop despite repeatedly trying. Blackboard has failed to implement reasonable opt-out procedures to prevent these unauthorized calls from continuing. Such procedures are not difficult to implement and, yet, Blackboard now actually wants permission to avoid ever having to implement such procedures. At the same time, Blackboard is charging their educational clients for these improper, ineffectual and illegal automatic cellular telephone calls that they could prevent.

As a marketer of automated telecommunications technology and services, Blackboard has the same responsibilities as any other company providing the same or similar technology. It is responsible for obtaining prior express consent before making automated voice or text message calls to cellular subscribers. Once it has this consent, it is responsible for ensuring that it maintains express consent to contact the party that it is actually calling. Granting Blackboard's emergency exemption would simply allow it to avoid these responsibilities and place as many calls as it wants without prior express consent.

There is no question that schools and educational institutions should be immune from TCPA liability for making legitimate emergency calls that affect the safety of our children—but they *already* are immune for such calls, as are other institutions and organizations. However, technology vendors that place automated calls and text messages that are not at all made for emergency purposes should not be immunized simply because they're made on behalf of a particular type of organization. There is no reason why these providers of mass automated calling services should not be subject to the same federal laws and regulations regardless of the market or industry for which they provide such services.

The misdirected call violations of the TCPA that Blackboard is ultimately seeking immunity from are caused in large part by calling numbers that were ported from landline to cellular service providers and calling cellular numbers that have changed hands, or have been recycled since the time consent was originally obtained. There are many technology solutions available to avoid calling numbers that have been recycled and reaching individuals that never provided prior express consent to be contacted. These TCPA violations occur simply because these technologies are not employed. Access to a number portability database as well as arrangements with the cellular service providers can prevent automated calls to both ported and recycled cellular telephone numbers—and, in fact, many companies actually use these technologies to prevent calling numbers for which they do not have consent. Certainly a company the size of Blackboard, which advertises that it has made billions of automated voice and text message calls (*see attached Blackboard Connect 5 marketing brochure*), has the resources to employ existing technology solutions to avoid automatically calling cellular numbers of individuals that have not provided consent. Mobile marketing companies,

telemarketing companies and debt collection companies employ these technologies today to fully comply with the TCPA. Such companies have no need to request regulatory changes so that their calls are categorized as emergency service calls to avoid TCPA violations—and it would be preposterous for them to do so.

The technology exists for any telecommunications company to eliminate, or at least greatly reduce, the number of misdirected calls that it automatically dials. Blackboard is certainly capable of employing these technologies as well as effective opt-out procedures to avoid violating the TCPA. Blackboard can take these necessary steps but has asked, instead, to be allowed to maximize its own profits at the expense of the privacy rights of the public. A broad "emergency exemption" for otherwise non-emergency informational calls related to "educational organizations" is unnecessary and not justified as a matter of public policy.

Sincerely,

Randall A. Snyder

Randall A. Snyder
President
Wireless Research Services, LLC
(http://www.WirelessResearchServices.com)

# Connect with confidence.™

## ENGAGE PARENTS. IMPROVE SAFETY. BOOST STUDENT ACHIEVEMENT.

Blackboard Connect 5 will transform your communications, increasing your effectiveness both for emergency notifications and community outreach. Create and send messages faster than ever, and take more confidence in the relevance of your message. There's never been an easier way to help keep your district safe and informed.

Create, schedule, send and track messages with Blackboard Connect 5. With the power to reach thousands of parents and community members in minutes, it's the proven way to keep your district informed, involved and prepared.

### Blackboard Connect helps you:

**Engage parents.** Reach parents with important information to foster student success. Blackboard Connect 5 gives you the power to engage parents with messages about events, curriculum changes and student performance—in the languages they speak and on the devices they prefer.

**Improve safety and security.** In an emergency, every second counts, and effective communication is a key component of any district's crisis response plan. Blackboard Connect 5 ensures you can reach thousands of parents, faculty and staff in minutes with critical messages of instruction and reassurance.

**Boost student achievement.** Improve attendance, reduce truancy, and positively influence the way students perform in the classroom. Blackboard Connect 5 can be used to send daily attendance reminders, grade threshold reports and classroom behavior notifications.

**Recoup fees and see a tangible return on investment.** Using Blackboard Connect 5 to remind parents of outstanding library, cafeteria and other balances, schools can find the service quickly generates enough revenue to pay for itself. By communicating electronically, districts can also save significant amounts on printing, distribution and administrative costs.

> *The timeliness and ease of the system allowed us to be much more efficient in our communications. Blackboard Connect immediately expanded our ability to make contact with and engage our parents.*
>
> Diane Turner,
> *Chief Communications Officer, Federal Way Public Schools*

**Take control of your message before others do.** Being perceived as a primary source of information is important to both a district's safety and reputation. Blackboard Connect 5 can be used to quickly keep parents and community members informed of the facts to mitigate the effects of mass media and rumor mills.

*Parents place their trust in us on a daily basis and rely on us to keep their children safe—both on and off campus. Part of respecting and cultivating this trust is ensuring that parents know they're going to hear from us directly in case of emergency. Blackboard Connect allows us to reach parents within minutes of an incident.*

Lisa Dana,
*District Superintendent, Danvers School District*

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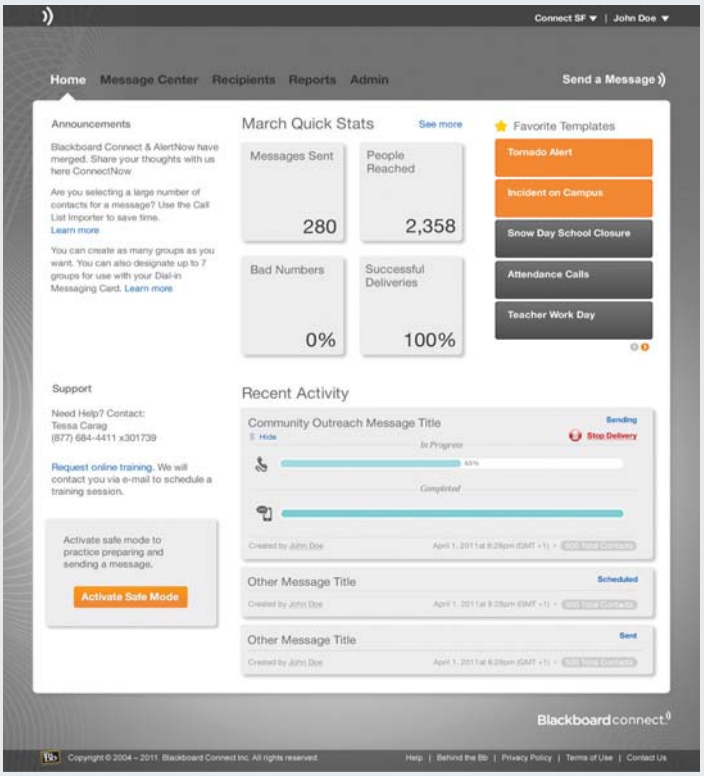


## Click less, communicate more with Blackboard Connect 5

- **Send messages faster.** The clean, intuitive interface in Blackboard Connect 5 is simple to use. Sending messages is an easy, two-step process, thanks to a streamlined message workflow and pre-set scenario templates.
- **Create a personalized experience.** The customizable Connect 5 portal gives parents the ability to view recent messages, update contact information, and indicate a preferred mode of communication.
- **Match the right audience with the right information.** Sophisticated—yet easy to use—targeting tools ensure you connect with your recipients in a more relevant way.
- **See results in real time.** Up-to-the-minute reporting tools give you real-time statistics on message delivery status.
- **Send messages from anywhere.** Connect messages can be sent from your desktop computer, your landline connection—even your Apple® iPhone®.

## Blackboard Connect 5 is:

**Reliable:** Blackboard Connect has partnerships with multiple tier-one telecommunications providers, supporting a redundant, no-single-point-of-failure system. Multiple data storage facilities ensure data is always backed up, and multimodal capabilities help reach people no matter where they are.

**Supported:** Blackboard Connect client care delivers more than 24/7 service. We assign you a personal representative who will go above and beyond by delivering communications counsel and best practices. We can even send a message on your behalf when you're not able.

**Tested:** We have over a decade of experience in sending billions of time-sensitive notifications. In 2010, we delivered over 600 million voice messages, more 190 million email messages, and over 7 million text messages using the Blackboard Connect platform.

**A proven partner to education:** We're the only mass notification service provider dedicated to serving the complete education process—from teaching and learning, to collaboration, communications and more. We can offer a unique perspective about how to get the most from your education technologies and advance the performance of your institution and the communities it serves.

blackboard.com • 650 Massachusetts Avenue, NW 6th Floor Washington, DC 20001 • 1.800.424.9299, ext. 4



Blackboard

Blackboard connect™

# Trusted When It Matters Most

## Streamline recruitment, retention, and outreach with Blackboard Connect.™

Successful enrollment management today requires more than site visits and brochure mailings. Economic uncertainties, the growing ineffectiveness of traditional advertising with the younger demographic, and an expected decline in the number of high school graduates will make effective retention and recruitment even more challenging in the coming years. Targeted communication is the key to attracting new prospects and keeping current students engaged and on the path to timely graduation. But with fewer resources — and less time than ever—how can enrollment managers connect quickly and efficiently with thousands — or even hundreds of thousands — of students?

# Recruit and Retain Top Students

The Blackboard Connect™ service is now employed by institutions nationwide to connect with students regarding financial aid, tuition nonpayment, and admissions deadlines.

**WHY BLACKBOARD CONNECT?**

Blackboard Connect was designed to help schools communicate with thousands of students in minutes. But our years of experience in higher education mean we deliver more than just the capability to make phone calls. Round-the-clock customer care—twenty-four hours a day, 7 days a week, 365 days a year—ensures live help is always available. We employ comprehensive security and redundancy measures—proactive analyses of threats, business continuity audits, and multiple nationwide data back-ups—to preserve data integrity. Our call routing, throttling, and load balancing expertise, as well as our robust relationships with multiple telecommunication providers, prevent messages from being dropped or delayed. And our experience in delivering over ten million time-based notifications forty month ensures messages are delivered on time, in all conditions.

**Blackboard Connect allows personalized communication with students and prospects.**

The Blackboard Connect strategic notification service allows institutions to send thousands of targeted messages—via phone, text, or e-mail—*in minutes.* Once used primarily for sending safety alerts to campus communities, the service is now employed by schools nationwide to connect with students regarding financial aid, tuition nonpayment, and admissions deadlines. Blackboard Connect enhances existing enrollment management plans by providing a quick and easy way to communicate with a single phone call—*all without using additional staff resources.*

Connect with students regarding financial aid, tuition nonpayment, and admissions deadlines.

**Engage earlier and more frequently with prospects.**

Fierce competition and expected declines in the number of high school graduates mean that recruitment efforts now start as early as the seventh grade. Blackboard Connect allows schools to easily start building relationships with prospects, and the service works in tandem with site visits and other forms of engagement. Schools can expand recruitment efforts—without an increase in personnel—by touching prospects with outreach messages, application date reminders, and messages from a student's area of interest—sports, music, physics, or clubs. Using Blackboard Connect, these relationships can be nurtured through the entire student lifecycle, from prospect to alumnus.

The Blackboard Connect service works in tandem with site visits and other forms of engagement.

# Benefits of Blackboard Connect™

- **Facilitate the collection of late tuition payments and fees—without employing phone banks or temporary employees.** Blackboard Connect pays for itself by using the service to remind students of outstanding fees and payments, most schools find the service quickly pays for itself. With Blackboard Connect, schools can facilitate the collection of lost revenue by messaging students about tuition nonpayment, parking tickets, and other outstanding fees.
- **Reach students using their preferred method of communication—and in their preferred language.** Students today use a variety of communication methods, and reaching them requires leveraging channels that resonate. With Blackboard Connect, schools can send messages via phone, e-mail, or text—and deliver messages in multiple languages.
- **Keep students in school and on the path to timely graduation with tuition and financial aid reminders.** Retention rates are critical to both an institution's ability to continue to provide quality educational services and the institution's reputation among potential matriculants. Timely tuition reminders, financial aid verification notifications, and dropped class warnings can all help keep students on the path to an on-time graduation.
- **Engage students and improve learning by fostering a sense of community both in and out of the lecture hall.** Notification capabilities extend beyond administrators: Blackboard Connect can be used by professors, counselors, and other staff to connect one-on-one with students. Schools today serve a wide variety of students, and targeted, specific messaging via Blackboard Connect—in the voice of a trusted professor or counselor—can help keep students focused, engaged, and connected.

"The ability to send personalized messages by phone and e-mail lets us reach students in their own language to provide individual attention."

Ester Hugo
*Outreach Counselor*
*Santa Monica College, Calif.*

- **No hardware. No software. No additional phone lines. Just reliable messaging.** The Blackboard Connect service is a fully hosted, fully managed Software-as-a-Service (SaaS) solution that lets schools deploy time-based messages, without having to invest or maintain hardware, software, or additional phone lines. Since the service is web-based, it can be accessed anywhere, at any time. Messages can be recorded in the voice of a trusted campus member—dean, counselor, professor—and segmented to better resonate with campus community subsets. All of your key departments can share resources and user groups for cross-departmental communication—from Campus Security to the Bursar's Office—can use the service daily to strengthen campus connections through improved communication. Many of our clients report *that the cost of the service quickly pays for itself.*

All of your key departments can share resources and user groups for cross-departmental communication.

Blackboard connect™

# Communicate More and Spend Less

**Ensure everybody gets the message—and confirm delivery to easily address student rebuttals.**

"But I never got the call!" is frequently heard from students who are dropped from classes due to nonpayment. Blackboard Connect's delivery confirmation quickly addresses student arguments. A message delivery receipt provides the date and time messages were received, as well as whether the call was live or left on a student's voicemail.

**Get your own 'report card' with easy, automated survey capabilities.**

What's working? What isn't? Easily create and send surveys to 40—or 40,000—recipients. Responses are automatically tracked and organized in a comprehensive report, and schools can quickly determine both areas of success and areas that may warrant additional attention.

CASE IN POINT

**Blackboard Connect and Delaware County Community College: Daily Reminders Save 50-60% of Nonpaying Registrants**

For many colleges, notifying students of outstanding tuition payments—and the possibility of dropped classes—consumes tremendous resources. Making thousands of calls often requires phone banks, temporary employees, and staff time, all of which can eat into even the most robust budgets. For Delaware County Community College (DCCC), a public, two-year college in Pennsylvania, the sheer size of the student body—over 27,000 credit and non-credit students—made contacting students about outstanding tuition payments even more challenging.

In 2007, DCCC turned to Blackboard Connect to help them message students about nonpayment. Students were encouraged to pay their tuition bills or run the risk of being dropped for the term. In the beginning, the College used the service to send five or six reminders before and during the first several weeks of the term; however, a desire for a more accurate day-to-day financial picture led the College to increase messaging frequency. The College was able to begin contacting students nightly regarding nonpayment. "The service has been a way for us to provide a preemptive outreach to students before they are dropped for nonpayment," said Fran Cubberley, the College's vice president for enrollment management. "Using Blackboard Connect to send daily reminders allowed us to save 50 to 60 percent of nonpaying registrants. Our administrators think it's the greatest thing since sliced bread."

www.blackboard.com/connect

Blackboard Connect Inc.
15301 Ventura Blvd., Building B, Suite 300
Sherman Oaks CA 91403



Bb Blackboard

# Randall A. Snyder
# Curriculum Vitae

## Professional Summary

Randall Snyder is a recognized expert in wireless and cellular telecommunications technology, executive manager and leader, designing, developing, marketing and managing mobile telecommunication system and software products. He has over 30 years of experience specializing in wireless telecommunications technology, network architecture, design, system engineering, marketing and product management. He is a reputable leader and strategic developer with a successful background building startups. He is skilled presenter, communicator, and educator with success impacting organizational performance, corporate reputation and increasing sales. Mr. Snyder is results-oriented, highly organized and creatively focused on adhering to organizational missions and philosophy while designing best-of-breed mobile technology solutions. He has extensive travel experience to Asia-Pac, Latin America and Europe supporting engineering, sales and marketing and has familiarity with wireless network operators and manufacturers worldwide. Mr. Snyder has several years of wireless technology standards development experience and has been issued 25 patents related to wireless telecommunications technology. Mr. Snyder has also been retained as an expert witness in over 95 legal cases involving wireless telecommunications technology.

## Expertise

- Business Relations: Seminars, Sales Presentations and Sales Engineering
- Legal: Provisional and Patent Applications, Subject Matter Expert Consultant, Expert Witness and Testimony, Litigation Support, Sales and Vendor Contract Negotiations and Review, Qualified as an Expert in Federal District Court
- Management: Strategic/Tactical Planning, Product Management, Marketing Management, Operations Management, Competitive Analysis, Problem Resolution, Project Planning, Risk Management
- Organizational: P&L Management, Budget Planning, Expense Reduction and Cost Control
- Technology: Wireless Network Engineering, Design and Architecture, Multimedia Systems, Mobile Internet, Mobile Video, Mobile Marketing, mCommerce and Mobile Payments, Mobile Telecommunications Standards, 3G, UMTS, LTE, LBS, SMS, MMS, WAP, GSM, and ANSI-41 (CDMA) Networking, Signaling System No. 7 (SS7), Communications Protocols, Telephone Consumer Protection Act (TCPA), Automatic Telephone Dialing Systems (ATDS)

## Education

| Year | College or University | Degree |
|---|---|---|
| 1984 | Franklin and Marshall College | B.A., Mathematics (minor in Astronomy) |

## Professional Experience

From: January 2007
To: Present
Organization: Wireless Research Services, LLC; Las Vegas, NV
Title: President and Founder
Summary: Responsible for consulting business, and revenue as well as being the principal consultant. Areas of subject matter expertise include mobile and cellular networking, 3G, LTE, UMTS, GSM, ANSI-41, LBS, SMS, MMS, WAP, SS7, Diameter Signaling, Automatic Telephone Dialing Systems (ATDS) and mobile multimedia systems. With this expertise, primary consulting is in the area of system and product architecture, design, development, management and marketing as well as patent preparation and development, expert reports, expert testimony and litigation support. Expert witness and technology consultant for over 95 legal cases; authored over 80 expert reports for intellectual property cases, Telephone Consumer Protection Act (TCPA) cases and wireless technology litigation cases.

Notable Case:

- Personally cited by United States Court of Appeals for the Ninth Circuit. Satterfield v. Simon & Schuster, Inc. No. 07-16356, D.C. No. CV-06-02893-CW Opinion. Appeal from the United States District Court for the Northern District of California. Opinion by N.R. Smith, Circuit Judge. Filed June 19, 2009.

  Result of expert opinion greatly expanded the TCPA and was followed by formal FCC Declaratory Rulings citing this case that text messages are calls as defined by the TCPA and dialing numbers from a stored electronic list of telephone numbers falls within the definition of an Automatic Telephone Dialing System (ATDS).

From: September 2007
To: August 2010
Organization: Finsphere Corporation; Bellevue, WA
Title: Vice President Product Management & Wireless Engineering
Summary: Was among the first handful of employees at Finsphere prior to Series A funding. As vice president of product management and wireless engineering and a member of the executive management team, was responsible for product management activities and wireless technology solutions for Finsphere's products. These products encompassed mobile location based software-as-a-service (SaaS) products offered primarily to financial institutions and banks. Responsibilities included product requirements and system functionality, strategic planning, R&D of new technologies, wireless network interconnectivity as well as wireless technology for Finsphere's products. Was also responsible for market strategies, white papers and development and management of intellectual property and patent applications.

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| From: | May 2004 |
| To: | April 2007 |
| Organization: | Entriq, Inc.; Carlsbad, CA |
| Title: | Vice President Product Management |
| Summary: | Was responsible for the entire product management team and system architecture for Entriq's products and services. Products encompassed mobile and broadband pay media applications (specializing in video), digital rights management (DRM) and security solutions, e-commerce and m-commerce systems as well as ad management and delivery solutions for both broadband and mobile media services. Responsibilities also included network and protocol analysis, market analysis, evaluation of third-party software and services, all vendor contract negotiations, RFP responses and overall administrative responsibility for the entire product line. Was responsible for directing and managing the technical writing department producing all user documentation associated with the products. Was nominated for a National Television Arts and Sciences Emmy Award for Outstanding Achievement in Advanced Media Technology for unique mobile technology designed, developed and commercially deployed as part of Entriq's solution. |

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| From: | February 2002 |
| To: | November 2003 |
| Organization: | m-Qube, Inc. (acquired by Verisign); Boston, MA |
| Title: | Vice President Product Management and Carrier Marketing and Founder |
| Summary: | Was responsible for the entire product management and carrier marketing teams, member of the executive management team and one of the founders. Was responsible for all product management, system engineering and product strategy for all business conducted with the wireless industry and carriers. Was in charge of the market strategy and wireless network architecture for m-Qube's mobile marketing service, a value-added service offering mobile marketing solutions to wireless carriers using short message services (SMS) for GSM and CDMA networks. The service architecture enabled branded companies to deploy promotional marketing and messaging campaign dialogs with mobile subscribers via SMS. The network architecture required definition and design of all aspects of the overall network including SMS technology, interconnectivity to the wireless carriers, signaling, traffic management, market requirements for features and services, network equipment specifications and OA&M. |

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| From: | April 2001 |
| To: | February 2002 |
| Organization: | Bitfone Corporation; Mountain View, CA |
| Title: | Vice President Product Management and Marketing |
| Summary: | Was responsible for the entire product management team and all of the company's product definitions, strategies and positioning. Had direct responsibility for market and product requirements, market research, competitive analysis, product strategy and sales strategy. Bitfone's products included the iBroker, a mobile Internet technology infrastructure platform to enhance WAP, MMS, mobile e-mail and wireless |

messaging. Was also responsible for the mProve product (obtained via merger with Digital Transit, Inc.) providing over-the-air firmware and software update technology to mobile devices.

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| From: | November 2000 |
| To: | April 2001 |
| Organization: | Openwave Systems (via merger of Phone.com and Software.com); Redwood City, CA |
| Title: | Executive Director Emerging Technologies |
| Summary: | Was responsible for new 3G technologies and providing market and product plans for those technologies for the entire product line. Primary responsibility for the 3GPP Multimedia Messaging Service (MMS), collecting market requirements from customers, developing corporate strategy for MMS and preparing the organization for additional development of the product. In addition, taught wireless technology classes to the different departments at Openwave and educated them on wireless service provider strategies and network technologies. |

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| From: | March 2000 |
| To: | November 2000 |
| Organization: | @Mobile and Software.com (via acquisition); Santa Barbara, CA |
| Title: | Director Wireless Product Management |
| Summary: | Was responsible for the product managers and for all of the wireless internet infrastructure products. Responsibilities included the overall market and product strategy for Software.com's wireless e-mail, short message service, instant messaging and unified messaging products. Was responsible for the overall revenues generated from these products based on detailed product plans and internal organizational planning. Much of his time was spent working with the executive management team and the sales directors on corporate market strategy. |

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| From: | December 1999 |
| To: | March 2000 |
| Organization: | FreeSpace Communications, Inc.; Palo Alto, CA |
| Title: | Consulting Network Systems Engineer |
| Summary: | Was responsible for the complete design of the backbone network architecture for a new broadband fixed wireless data network. This new architecture incorporated DSL as the backbone network technology. The network architecture required definition and design of all aspects of the overall network plan including DSL technology, IP technology, ATM technology, interconnectivity to the PSTN, operations signaling, traffic engineering, market requirements for network features and services, network equipment specifications and OA&M. |

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| From: | April 1992 |
| To: | December 1999 |
| Organization: | Synacom Technology, Inc.; San Jose, CA |

Title: Executive Director Product Marketing and Management
Summary:

1998 – 1999 Executive Director Product Marketing and Management

- Responsible for managing the entire product management and marketing department of Synacom Technology, including market research and planning, product management and market communications. Lead the entire design, definition and product direction of all aspects of Synacom's products.

1997 – 1998 Director Systems Engineering

- Responsible for coordinating and managing the overall functional and requirements specifications for all Synacom's products as well as the detailed test plans used for alpha system testing of those products. Also responsible for directing and managing the technical writing department producing all of the user documentation associated with all of the products. Provided the primary sales engineering support for sales and marketing and was involved in nearly every aspect of the product lifecycle.

1996 – 1997 Director Consulting Services and Principal Engineer

- Responsible for obtaining, coordinating and managing all technical consulting projects performed by the company. These projects included wireless network architecture and design for both IS-41 and GSM networks for dozens of client companies (carriers and equipment manufacturers). In this role, continued as a member of both the ANSI/TIA TR45.2 Subcommittee for cellular radio intersystem operations standards and the ANSI/TIA TR46 Committee for 1900 MHz GSM PCS standards. Major contributor to TR46 in the area of GSM-to-IS-41 network interworking. Also authored, edited and published TIA standard specification IS-93 for cellular network interconnections to the PSTN and ISDN.

1992 – 1996 Principal Engineer

- Consulted for McCaw Cellular, AT&T Wireless, AirTouch Cellular, AirTouch Satellite Services, Globalstar, Nokia, MCI, Sprint PCS, XYPoint, NextWave, NewNet American Personal Communications, CTIA and several other national and international wireless telecommunications companies.
- Wrote wireless network design and analysis papers including HLR specifications, Authentication Center specifications, PCS network design, short message service (SMS) design, intelligent network applications of wireless technology and in-house expert in signaling protocols. Extensive experience with Signaling System No. 7, including both protocol implementation and design. Authored the Standard Requirements Document for the SS7-based A-interface between the base station and MSC used throughout the TIA. Also involved in the design of the Bellcore WACS/PACS technology, digital cellular network service and feature descriptions, SCPs and HLRs. Extensive experience developing the architecture and design of distributed intelligent networks including, SS7, cellular, PCS, AIN and WIN networks. Key member of the original Cellular Digital Packet Data (CDPD) architecture and design team. Designed the CDPD air interface protocol emulator

developed and marketed by AirLink Communications, Inc.

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| From: | December 1990 |
| To: | April 1992 |
| Organization: | AT&T Bell Laboratories; Whippany, NJ |
| Title: | Consulting Member of the Technical Staff |
| Summary: | Evaluated wireless technology services for the Wireless Systems Architecture group. Also participated as a system engineer on the design of the Global System for Mobile (GSM) communication architecture and a software engineer developing the base station controller (BSC) for GSM. Also responsible for planning, coordinating, designing and testing the SS7 protocol software for the GSM A-interface between the BSC, MSC and operations and maintenance center (OMC). High-level and detailed design specifications were developed to coordinate the protocol testing between two remote laboratories. Provided the traffic analysis and traffic engineering of call traffic for the BSC. Specifically designed and developed the dynamic traffic overload control subsystem for the BSC. Presentations were given to technical staffs at multiple Bell Laboratories facilities supporting this work. |

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| From: | May 1987 |
| To: | December 1990 |
| Organization: | DGM&S, Inc.; Mt. Laurel, NJ |
| Title: | Senior Staff Consultant |
| Summary: | Responsible for the design, development and test coordination of an advanced intelligent network applications platform for a service control point (SCP). Also spent several years as a consulting software engineer for Siemens AG, developing and testing SS7 and call control software for the EWSD digital switching system for international as well as U.S. national network implementations. This work involved extensive travel to both Frankfurt and Munich, Germany for software system design and testing. Also involved in the concept, design and technical marketing of proprietary enabling technology software products for SS7 and ISDN. |

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| From: | May 1986 |
| To: | May 1987 |
| Organization: | ADP, Inc.; Mt. Laurel, NJ |
| Title: | Senior Software Engineer and Analyst |
| Summary: | Responsible for the design and development of data communications and real time database application software for a host data center that provided real time financial information to large brokerage houses. Data communication protocol expertise in HDLC, RS-232 and IBM BiSync. |

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| From: | June 1984 |
| To: | May 1986 |
| Organization: | C3, Inc.; Cape May, NJ |
| Title: | Consulting Systems Analyst and Software Engineer |
| Summary: | Civilian consulting systems analyst and engineer to the U.S. Coast Guard Electronics Engineering Center (EECEN) for C3, Inc. Developed sophisticated database software for shipboard use including inventory and law enforcement applications. The work included the follow-through of the entire project lifecycle including writing of requirements, functional, design and program specifications, coding, debugging, alpha and beta testing, release, shipboard installation and continuing technical support of the product. Received a personal commendation from Admiral W.F. Merlin, Chief, Office of Command, Control and Communications, for successful efforts on these projects. |

## Professional Affiliations, Achievements & Awards

- Member, Mobile Multimedia Institute
- Nominated, Technology and Engineering Emmy Award for Outstanding Achievement in Advanced Media Technology, 2006

## Patents, Publications & Citations

### Issued Patents

| Patent | Date | Description |
|---|---|---|
| US 8,954,102 | 2/10/2015 | System and Method for Determining and Delivering Appropriate Multimedia Content to Data Communication Devices |
| US 8,938,215 | 1/20/2015 | System and Method to Initiate a Mobile Data Communication Utilizing a Trigger System |
| US 8,923,902 | 12/30/2014 | Mobile Messaging Short Code Translation and Routing System and Method |
| US 8,839,394 | 9/16/2014 | Systems and Methods for Authenticating a User of a Computer Application, Network, or Device Using a Wireless Device |
| US 8,831,564 | 9/9/2014 | System and Method for Mobile Identity Protection Using Mobile Device Signaling Network Derived Location Pattern Recognition |
| US 8,819,141 | 8/26/2014 | Centralized Mobile and Wireless Messaging Opt-out Registry System and Method |
| US 8,761,732 | 6/24/2014 | System and Method to Initiate a Mobile Data Communication Utilizing a Trigger System |

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|---|---|---|
| US 8,670,753 | 3/11/2014 | System and Method for Determining and Delivering Appropriate Multimedia Content to Data Communication Devices |
| Mexico 308720 B | 12/4/2013 | Sistema y Metodo para el Analisis Automatizado que Compara una Ubicacion del Dispositivo Inalambrico con Otra Ubicacion Geografica |
| US 8,588,748 | 11/19/2013 | System and Method for Mobile Identity Protection of a User of Multiple Computer Applications, Networks or Devices |
| US 8,437,784 | 5/7/2013 | System and Method to Initiate a Mobile Data Communication Utilizing a Trigger System |
| US 8,374,634 | 2/12/2013 | System and Method for Automated Analysis Comparing a Wireless Device Location with Another Geographic Location |
| US 8,280,348 | 10/2/2012 | System and Method for Mobile Identity Protection Using Mobile Device Signaling Network Derived Location Pattern Recognition |
| US 8,155,677 | 4/10/2012 | Mobile Messaging Short Code Translation and Routing System and Method |
| New Zealand 580499 | 8/31/2012 | System and Method for Automated Analysis Comparing a Wireless Device Location with Another Geographic Location |
| US 8,131,262 | 3/6/2010 | System and Method to Initiate a Mobile Data Communication Utilizing a Trigger System |
| US 8,116,731 | 2/14/2012 | System and Method for Mobile Identity Protection of a User of Multiple Computer Applications, Networks or Devices |
| Australia 2008/115299 | 2/9/2012 | System and Method for Automated Analysis Comparing a Wireless Device Location with Another Geographic Location |
| S. Africa 2009/06947 | 1/26/2011 | System and Method for Automated Analysis Comparing a Wireless Device Location with Another Geographic Location |
| US 7,792,518 | 9/7/2010 | System and Method to Initiate a Mobile Data Communication Utilizing a Trigger System |
| US 7,403,788 | 7/22/2008 | System and Method to Initiate a Mobile Data Communication Utilizing a Trigger System |
| US 6,128,389 | 10/3/2000 | Authentication Key Management System and Method |
| US 5,970,144 | 10/19/1999 | Secure Authentication-Key Management System and Method for Mobile Communications |
| US 5,850,445 | 12/15/1998 | Authentication Key Management System and Method |
| US 5,799,084 | 8/25/1998 | System and Method for Authenticating Cellular Telephonic Communication |

## Publications

1. What Workers Want from Wireless by Randall A. Snyder; April 15, 2004. America's Network, Advanstar Communications, Santa Ana, California USA.
2. Snyder, Randall A. and Gallagher, Michael D. Wireless Telecommunications Networking with ANSI-41 Second Edition; McGraw-Hill, New York, NY USA; © Copyright 2001 Randall A. Snyder and Michael D. Gallagher. *Foreword by Tom Wheeler, current Chairman, Federal Communications Commission*.

3. Forecasting SS7 Traffic by Randall A. Snyder; November 1, 2000. Wireless Review, Volume 17, Number 21, Intertec Publishing, Overland Park, KS USA.
4. Gallagher, Michael D. and Snyder, Randall A. Mobile Telecommunications Networking with IS-41; McGraw-Hill, New York, NY USA; © Copyright 1997 Michael D. Gallagher and Randall A. Snyder.
5. IS-41/GSM Interoperability by Randy Snyder; December, 1995, Cellular Networking Perspectives, Cellular Networking Perspectives, LTD, Calgary, Alberta, Canada.

## Citations

1. Commendation from Admiral W.F. Merlin, Chief, Office of Command, Control and Communications, USCG (1986)
2. Method and Apparatus for Routing Short Messages, US Patent #6308075, Issued October 23, 2001.
3. Mediation Software for Delivery of Interactive Mobile Messaging and Personalized Content to Mobile Devices. Patent Application # 20020120779, August 29, 2002.
4. Automatic In-Line Messaging System, US Patent #6718178, Issued April 6, 2004.
5. Method and System for Wireless Instant Messaging, US Patent #7058036, Issued June 6, 2006.
6. United States Court of Appeals for the Ninth Circuit. Satterfield v. Simon & Schuster, Inc. No. 07-16356, D.C. No. CV-06-02893-CW Opinion. Appeal from the United States District Court for the Northern District of California. Opinion by N.R. Smith, Circuit Judge. Filed June 19, 2009.